COMMITTEE WORKSHOP

BEFORE THE

CALIFORNIA ENERGY RESOURCES CONSERVATION

AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Preparation of the 2007	)	Docket No.
Integrated Energy Policy	)	06-IEP-1A
Report (2007 IEPR)	)	
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CALIFORNIA ENERGY COMMISSION

HEARING ROOM A

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

MONDAY, OCTOBER 15, 2007

9:00 A.M.

Reported by:
John Cota
Contract No. 150-07-001

COMMISSIONERS PRESENT

John L. Geesman, Presiding Member

Jeffrey Byron

ADVISORS PRESENT

Suzanne Korosec

Jan McFarland

Tim Tutt

STAFF and CONTRACTORS PRESENT

Panama Bartholomy

James Fore

Bob McBride

Pat Perez

Lorraine White

ALSO PRESENT

Gina Grey, Western States Petroleum Association
(via telephone)

Mark Sweeney, Energy and Utility Consulting

Les Guliasi, Pacific Gas and Electric Company

Ken Glick

Joe Langenberg (via telephone)

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P R O C E E D I N G S

9:03 a.m.

PRESIDING MEMBER GEESMAN: We're going to go ahead and get started. This is a Committee Hearing of the California Energy Commission's Integrated Energy Policy Report Committee on the Draft 2007 Integrated Energy Policy Report.

I'm John Geesman, the Associate Member of the Committee. Commissioner Pfannenstiel, the Chair of the Committee, is ill today but hopefully will be trying to connect by phone so that she can listen to the comments made.

To my left, Commissioner Jeff Byron, who is the Associate Member of the Commission's Natural Gas Committee and also the Presiding Member of the Commission's Electricity Committee. He has sat in on a number of proceedings that the IEPR Committee has held this year.

To his left, Tim Tutt, Chairman Pfannenstiel's advisor. To my right Suzanne Korosec and Jan McFarland, my staff advisors. Lorraine, why don't we get started.

MS. WHITE: Yes and thank you.

My name is Lorraine White. I am the Program Manager for the 2007 Integrated Energy

Policy Report proceeding. Welcome. Thank you all for joining us today as we go through a portion of the Committee's draft report. Today and tomorrow we will be discussing the entire report and getting your input and comments so we can refine the document.

I have a few logistical things to go over with you. In the event that there is an emergency we ask that folks calmly exit the hearing room, following staff to the park across the street until such time as we are given the all-clear sign to return.

In the event during the day you would like some refreshments at the top of the stairs underneath the awning we have a little snack shop. There's also restrooms out the double doors here and to the left as well as behind the elevators.

To facilitate public participation we are providing both audio and visual presentation of this hearing on the Commission's website. To join in the webcast please go to www.energy.ca.gov. For those that are interested in providing comment or asking questions through the course of this hearing you can do so through our call in number at 1-800-857-6618. The

passcode is IEPR and I am the call leader.

We encourage those who have joined us today in the event that you would like to make comments please let us know. To help facilitate your participation there are some blue cards at the front of the room in the foyer. And if you would like to fill those out and hand them to me I can provide them to Commissioner Geesman over the course of the day.

As I said this is the first of two days of hearings that we are going to be having on the Committee's report. I'll be providing a brief overview of the proceeding and the first chapter of the report.

We also will be hearing from Pat Perez who will be doing the presentation on the transportation chapter. Panama Bartholomy will be providing the discussion of the energy and land use chapter and then Jim Fore will be providing the discussion on natural gas assessments.

After each of the presentations we encourage folks if you have comments or questions to do so after that segment. We will follow the same procedure tomorrow. We will be discussing the electricity chapter, the energy efficiency

chapter, the renewables chapter and lastly the electric distribution systems chapter.

For those of you who have been involved in this proceeding throughout the beginning you're familiar with this slide. It basically lays out what the IEPR's basic requirements are. We are tasked with assessing and forecasting energy resource supply, demand and price as part of our fundamental analyses.

In this particular proceeding that work is contained in numerous staff, consultant and committee reports. We cover in-depth at least 12 to 20 different topics that have been summarized in the Committee's report.

This process is supported by the extensive participation of various stakeholders and market participants in which we actually are dependant for a lot of the information that is a part of our analysis.

We consult with various sister agencies at the federal, state and local level.

We've conducted over the course of our IEPR proceedings very open and public processes. This particular proceeding was no different with more than 75 public meetings to date.

From all of this analyses, discussion and public dialogue the Committee has developed and is recommending various policies to address particular issues identified as a part of this proceeding.

And of course this is something we're tasked with doing every two years.

One of the key reports that came out of this proceeding and was adopted by the Commission on January 3, 2007 was our 2006 Update, which provided an in-depth review of the renewable portfolio standard and an initial discussion of the relationship between land use and energy. We built off of this work as part of the work that we did in our renewables chapter as well as what you'll be hearing about a little bit later today by Panama in the land use and energy chapter.

The remaining process in order to complete this particular Integrated Energy Policy Report, we ask that parties provide us with their written comments by October 19. We hope to hear a lot of what those comments might be today and tomorrow. We will take that input, the Committee will weigh it and develop their Committee Final Report to be published November 7. On November 21

we are currently scheduling the adoption of this document at our regularly scheduled Business Meeting.

For those of you who would like a lot more information about what we have done during this proceeding I welcome you to visit our Energy Commission website. There is an easy link on the main page that will take you to all of the notices, documents and all of the information about the proceeding. Or, of course, you're welcome to contact me directly.

If there's no questions about the logistics we can go right into the discussion of the Committee's report.

The first chapter of the Committee's report lays the context for much of the proceeding chapters. And if you would like I will do this.

It is in this chapter that we acknowledge that much of what we are analyzing is now in the context of greenhouse gas emission reductions.

The Governor in Signing the California Global Warming Act of 2006 acknowledged that we have completed the debate. That there is ample science on which to base our judgements. That we

need to act. And we need to act now.

But do so you have to understand the circumstances in which California finds itself. We have 37 million Californians today with a significant growth projected with 40 million residents by 2020.

We're the eighth largest economy in the world. We're the second largest consumer of gasoline. We're the twelfth largest emitter of greenhouse gas emissions.

In order to achieve the goals specified in AB 32 which is to cap our emissions at 1990 levels by 2020 this will be a significant task.

The state in order to fuel its economy and to meet the needs of its residents relies on a significant and diverse amount of resources not only in-state but that we import.

There was an error and I apologize for this in the slide. The upper right pie chart is actually the consumption not the source. And the lower left is the source not the consumption.

But essentially you can see from these two graphs, pie charts that much of what we rely on in this state to fuel our transportation, our commerce and to make our lives more comfortable is

heavily, carbon-laden resources.

Forty-six percent of our resources are petroleum based. And we have coal that we rely on, natural gas that we rely on and only a small portion of clean, renewable or hydro.

So when you take that information and you identify the breakout for greenhouse gas emissions you see that a significant portion of what we're going to have to address is in the transportation and electricity sectors.

And looking forward we still have all of the concerns that we have to manage and to address and to, in fact, respond to as government and industry. Meeting the growing demand, providing adequate resources, providing fuel diversity, addressing our aging infrastructure, maintaining an environmental quality or improving it as part of our environmental stewardship. And then, of course, developing a system that can respond to long-term uncertainty.

But our future is changing. We've begun to see some of these patterns already. And this is one of those patterns that's begun to change where we see a shift from our residential and population distribution more now going to the

inland areas than to the coastal areas.

And so this puts an increased demand especially on air conditioning when that population growth is in the more arid parts of the state.

So looking forward in order to power our nation state the policies that have been laid out before us are to make our system as efficient as possible, conserve resources where possible, insure a reliable and secure and diverse supply, protect the environment, enhance our economy and protect the public health and safety.

AB 32 adds another tenant to this. While we're achieving all those things we also have to do it reducing greenhouse gas emissions.

So the state has identified some basic strategies that they are going to employ to reach the AB 32 targets.

We're going to be looking at ways of improving the transportation sector and reducing its carbon intensity.

We'll be relying much on the programs and policies that we've already laid out related to efficiency and conservation in the electric and natural gas sectors.

We're going to be working on forestry issues and others to fill in more of those greenhouse gas emissions. But there remains a gap. And that gap will be hopefully addressed through cap and trade, additional efficiency and other measures not yet identified.

So this particular IEPR acknowledging all that has laid out the analysis and recommendations based on this reality.

Are there any questions on the context in which we've done our work? Commissioners can we move on?

ASSOCIATE MEMBER GEESMAN: Yes.

MS. WHITE: All right. Pat Perez.

MR. PEREZ: Thank you Lorraine and good morning Commissioners and advisors and our key stakeholders today.

I'd like to talk a little bit about the challenges we face in meeting California's transportation energy needs. And certainly today half of all of our energy used in the state moves people and goods.

And about 94 percent of the fuel demand is met by petroleum. Imports of petroleum blend stocks and increased bio-fuels present new

challenges for our marine port facilities and certainly constrained infrastructure results in greater price volatility and higher and more prolonged price spikes for all transportation fuels.

And as we heard from Lorraine earlier transportation contributes to more than one-third of the greenhouse gas emissions that are created in California.

Today I'd like to cover four major topics outlined in Chapter 7 of the Integrated Energy Policy Report, talk a little bit about fuel demand and price trends, a little bit about petroleum and energy infrastructure for receiving, distributing and storing transportation fuels in our state.

And then talk a little bit about the options to meet our many policy goals that we are after and then close with recommendations and some action steps for addressing some of the challenges and emerging issues that we face today in the transportation sector.

First for a little background just to provide some context and perspective of where we are today and where we're headed tomorrow.

California currently consumes about 20 billion gallons of gasoline and diesel. And we're projecting this to increase to 24 billion gallons by 2020.

And if we're successful in implementing our Assembly Bill 1007 objectives then the rate of growth in gasoline will decline particularly after 2012 if we're successful.

As Lorraine pointed out population is expected to grow at a fairly rapid rate, just over one percent per year reaching 42 million by 2020.

ASSOCIATE MEMBER GEESMAN: Pat can I jump in and ask --

MR. PEREZ: Yes.

ASSOCIATE MEMBER GEESMAN: -- all of the staff on this population question. The chart that Lorraine showed us not five minutes ago suggested 44.1 million in 2020 but you say 42 million.

MR. PEREZ: Forty-two.

ASSOCIATE MEMBER GEESMAN: A 2.1 million difference is a significant difference. So I'd ask that before we get to the point of bringing the report to the Commission there be some convergence on --

MR. PEREZ: On that.

ASSOCIATE MEMBER GEESMAN: -- which department of finance forecast we're relying upon for population.

MR. PEREZ: Okay, we'll do that. Thank you Commissioner. And most of the population growth is expected to occur in the warmer interior regions of the state. This is going to result in greater travel distances between housing and jobs, a topic of which will be covered in Panama's presentation following mine.

A little on transportation fuel demand. As I noted earlier gasoline demand will increase in the short term however beginning in about 2012 we do expect that with the introduction of more hybrid electric vehicles as well as diesel light-duty vehicles into California as they enter the fleet that this will temper the rate of growth in transportation demand and certainly lead to reduced gasoline demand in the future.

Greenhouse gas emission standards as well as higher prices that we're forecasting will also limit the rate of growth in demand. And we're certainly anticipating that diesel demand will continue to make major inroads due to increased freight and transit as well as off-road

uses because of the fuel efficiency advantages over gasoline.

And at the same time we're also projecting jet fuel and bio-fuel demand will increase over the long term.

ASSOCIATE MEMBER GEESMAN: You know we tend to give short shrift to jet fuel demand because we don't have a direct regulatory role there as a state. But I do think that one of the things that the draft report acknowledges is that limits on airport expansion may, in fact, cap or limit the amount of growth in air travel that takes place within California.

The report currently is silent on the high-speed rail proposal as a potential way in which to meet that inter-city demand in part currently being served by air travel.

And I'd ask the staff to take a closer look at the options available with respect to high-speed rail before we bring a final report to the Commission.

MR. PEREZ: All right. Thank you Commissioner. The next slide which is slide 5 for those of you listening in is our transportation fuel demand forecast. And despite the gasoline

use declining after 2012 we do expect total transportation fuel demand to rise over the next 20 plus years.

This figure clearly shows the growing role that imports play in meeting our expanding appetite for gasoline and bio-fuels in California, Arizona and Nevada.

And California refineries essentially supply all of Nevada's transportation fuel demands. Roughly 60 percent of Arizona total transportation fuel demand and about a third of Oregon's fuel needs.

I might just point out that fuel demand in our neighboring states of Arizona and Nevada are projected to grow at two to three times faster than California's.

With respect to California's petroleum and energy fuel infrastructure existing fuel infrastructure is at or near capacity, especially in southern California.

Local community pressure to either reduce existing or oppose expansion of infrastructure to acquire store and distribute transportation fuels is hard pressed at this time.

Some capacity could decline due to

business decisions not to comply with new regulatory standards with respect to seismic and other regulations and may result in phasing out existing operations.

Infrastructure will need to expand to meet expected demand. Otherwise congestion especially at marine terminals raises the risk of serious accidents and even spills as well as increased emissions and higher costs.

Just some of the challenges. Again, congestion is a continuing issue at our ports. Resistance to increasing capacity at the local level continues to be an issue and dredging to enable tankers to access and off-load cargos continues to be an issue in northern California.

Marine oil and terminal maintenance standards also pose some challenges. And crude oil imports during this time are expected to continue to rise due to declining oil production in-state as well as what we import from Alaska.

Transportation and alternative fuel imports are increasing with higher demand. Certainly constrained storage capacity also limits increased imports of alternative fuels necessary to meet the state's goals for reducing petroleum

use.

The good news is that California refinery capacity has been growing but not at a pace to keep up with rising demand in California as well as our neighboring states.

Certainly this figure shows, let me move on right here, there we go. Here's the slide showing the rate of change in expanded refinery capacity over the last 10 years. And as you can see the rate of growth in California has been less than half of what it is in the United States and the rest of the world.

In the late 1990's California became a net importer of gasoline. And it has been a wild ride ever since then. As the figure illustrated here we now face greater price volatility and higher and more prolonged price spikes for gasoline. But also for all petroleum products.

Recent oil and fuel price increases have resulted from a number of factors including higher growth in world petroleum demand, geo-political issues such as resource nationalization by the Venezuelan government over their facilities and unrest in Nigeria and other countries throughout the world.

Rising project costs have also affected investments and more frequent and prolonged refinery outages throughout California, the United States and elsewhere have also contributed to upward pressure on prices.

And certainly fuel inventory fluctuations as well as weather induced issues with respect to hurricanes affecting crude oil and natural gas prices.

And then finally the valuation or devaluation of the dollar, which oil is traded in, has also contributed to driving up prices. Since oil is traded in dollars, which has necessitated OPEC to encourage higher prices to compensate for the loss in the value of the dollar relative to other currencies.

In terms of our long-term forecast, again they show rising prices over the next 20 plus years. I would like to point out in terms of the high-priced case that for the Assembly Bill 1007 analysis the high-fuel price scenario was used with both a plus and minus 20 percent sensitivity to evaluate options.

Supplying transportation fuels poses many challenges for meeting demand while reducing

carbon emissions and addressing some of our infrastructure needs and challenges.

What we have outlined on this slide is some of the options to meet our five major policy goals which include petroleum reduction, our efforts to increase alternative fuel use as part of AB 1007 which lays out multiple strategies that combine private investment, financial incentives and technological advances.

And with the passage of AB 118 last night by the Governor we'll have an infusion of additional capital and money coming forth to support in these efforts.

Also increasing in-state production of bio-fuels, supporting partial greenhouse gas emission reduction targets due to the Global Solutions Act. And, again, transportation contributes about a third of the state's greenhouse gas emissions.

And then finally achieving the low-carbon fuel standard are all major, multiple, policy goals that we must pursue.

With respect to the next slide. Consumers we feel must have a broader set of choices to simultaneously reduce the

environmental, social and economic cost of the transportation energy we use, while also maintaining our mobility.

As such California must pursue multiple, complementary strategies that increase fuel efficiency as well as expand non-traditional fuel use and ultimately realign consumer preferences to reduce demand as well as reduce trips and vehicle miles traveled.

This next slide lays out a breakdown on the annual growth rates under a variety of scenarios for vehicle miles traveled. And what we have here is a range of future travel demand expected under different price and fuel efficiency standards. I am not going to go into great depth on this figure because Panama will be discussing vehicle miles traveled, land use and the energy implications and connections between these in a moment.

The next slide lays out fuel economy of passenger vehicles. And certainly what this figure shows when you look at the US relative to the European Union and Japan and even China for that matter is we have a great deal of room to improve the US and Canada.

Certainly the challenge will be working effectively with the federal government to improve new vehicle fuel efficiency since indeed this is the sole domain of the federal government. But nonetheless, as we pointed out in the previous IEPRs, or Integrated Energy Policy Reports, coalition building with our neighboring states should continue. And as was reported in the 2003 Integrated Energy Policy Report, doubling the fuel economy is probably the most significant and cost-effective strategy for reducing petroleum use.

This figures shows the greenhouse gas emission and petroleum reduction performance of the new, light duty vehicles on a well-to-wheels basis. And as the figure shows, depending upon the feed stock and origins of the production for these options, the benefits for petroleum reduction and greenhouse gas emissions reductions varies substantially.

Now with respect to recommendations and action steps as outlined in the report. Certainly we're encouraging greater participation in workshops as well as public forums stressing the role and connections that energy has with infrastructure, and our ability to reduce demand

for petroleum. As well as involving local and other state government agencies in expanding and understanding the critical, vital infrastructure and what it means to our economy.

More on recommendations and action steps. Certainly to enhance competition we need to ensure that independent traders are not locked out of California's market, and particularly with respect to infrastructure. And one of the things that we're contemplating is an arbitration mechanism to ensure that we have balance and that independent traders can enter and participate in the California market.

Also another recommendation is to propose a new law that allows a state appeals in petroleum infrastructure. Particularly with respect to leases on existing facilities as one way to address the tightness in critical infrastructure that is essential for receiving, storing and delivering transportation fuels in California.

And again we recommend monitoring the impact of the State Lands Commission Marine Oil Terminal Engineering and Maintenance Standards and what the possible impact of those regulations

might have on current operations at marine facilities as well as future facilities.

And then also pressing for a firm, federal funding mechanism to maintain adequate depth so that we can accommodate tanker traffic as it comes in, particularly to the Bay Area.

In conclusion and as part of the wrap-up, California needs a portfolio of alternative, low-carbon fuels to meet the state's multiple policy goals. We also have to recognize that we can't reliably meet our increasing fuel demand without a robust petroleum and energy infrastructure in the state.

And certainly the staff analysis that has been conducted on alternative fuels demonstrates that alternative fuels can provide substantial greenhouse gas reduction benefits, which are essential for meeting the overall goals for reducing greenhouse gas emissions in the state. And with that I would close with my remarks, Commissioners.

PRESIDING MEMBER GEESMAN: Thanks Pat. I have a blue card from Gina Grey from WSPA.

MS. GREY: Commissioner Geesman?

PRESIDING MEMBER GEESMAN: Yes.

MS. GREY: Yes. Gina Grey from WSPA. Thank you for the opportunity to speak. Due to the fact we have been working very hard to finalize our comments on the AB 1007 plan by Friday, and also due to the fact that the hearing date was changed for the topics that affect us, we have been unable to write comments for you today. If we'd had comments it wouldn't have made a difference anyway. But in general at this point we'll merely echo our oral comments from the AB 1007 workshop last week. Thank you.

PRESIDING MEMBER GEESMAN: Will you be submitting written comments later this week?

MS. GREY: Yes we will, Commissioner.

PRESIDING MEMBER GEESMAN: Excellent. Thanks very much.

Mark Sweeney, California Natural Gas Vehicle Coalition.

MR. SWEENEY: Thank you. I am a consultant supporting the California Natural Gas --

PRESIDING MEMBER GEESMAN: Mark, is your microphone on? The button needs to be pushed so that the green light is on.

MR. SWEENEY: Do you know where the

button is?

PRESIDING MEMBER GEESMAN: It's on the base of the microphone. It says, push.

MR. SWEENEY: I should be able to figure that out.

PRESIDING MEMBER GEESMAN: If you can. Every now and then we put one up there that doesn't work just to --

MR. SWEENEY: You're trying to throw me off my stride here.

PRESIDING MEMBER GEESMAN: Yes, yes.

MR. SWEENEY: I have a couple of comments, mostly which relate to inconsistencies between the information that is in the Draft 2007 IEPR and what is in AB 2007 (sic).

PRESIDING MEMBER GEESMAN: Let me jump in there. We intend to conform this chapter to the contents of the AB 1007 report. Because of a difference in timing and sequence of the publications of the two drafts the chapter on transportation in the IEPR has trailed -- excuse me, the 1007 report has trailed the work on this chapter. We do intend to conform this chapter to the 1007 statistical analysis and policy recommendations.

MR. SWEENEY: Including the transportation fuel demand forecasts?

PRESIDING MEMBER GEESMAN: Correct.

MR. SWEENEY: So what I'll do is provide my comments on the inconsistencies in written comments. I would like to focus for a minute on the oil price forecast. We and a number of other parties have recommended strongly in the past that the Energy Commission rely on the high oil price forecast as a most likely case. For the reasons that Pat pointed out on page 12, many of which are the reasons why it is realistic to think that high oil prices will continue in the future.

We compliment the AB 1007 effort because they did take the high oil price case as their base case and have a high and a low case plus 20/ minus 20 and we think that was a big step forward.

But I'm looking at page B3 in the appendix to the final staff report. And again, it is my understanding that for the IEPR effort the base case is used in developing the forecast of transportation energy demand. In nominal dollars that base case forecast calls for oil to average $63.25 a barrel in 2007 and $85.12 a barrel in 2030.

This morning on the NYMEX Exchange the crude oil contract for November delivery was trading at $85. So basically the base case forecast takes about 23 years to get to the level of oil prices that we're seeing today. And again, this is a reason why we strongly believe that the high oil price case is the most likely case. And if anything there should be recognition that the likelihood is significant that prices could even be higher than in that high oil price case.

So we compliment the AB 1007 effort on what's been done in terms of the base case oil price forecast and we would encourage the Commission to take the same step in the IEPR.

And the thing that we're concerned about. For example, Pat showed a forecast of 24 billion gallons a year in 2020 of gasoline demand. If I look back to the reducing California's Petroleum dependance report my recollection is that the goal for what is now the AB 1007 effort is for there to be 15 billion gallons of gasoline and diesel consumption in 2020. So there's a 9 billion barrel difference between the objectives for AB 2007 (sic) and what's reflected in the gasoline and diesel fuel forecast, demand forecast

that's in the IEPR.

And we believe that one of the reasons that the transportation demand, most vehicle miles traveled and fuel consumption is so high in the IEPR is because of the very low assumptions about gasoline and diesel prices that are represented by the base case oil price forecast. So there's a connection between the assumptions on energy prices and the demand for fuels and we think that should be ironed out.

Also on page 11 of the transportation fuels report, draft report, there is a forecast for 2030 of the composition of light duty vehicles in the marketplace, 100 percent of which consist of gasoline, diesel and hybrid vehicles. And again this is another area of inconsistency. Basically from my perspective the forecast that is in the final staff report basically implies that the AB 1007 effort will fail miserably in promoting the accelerated market penetration of alternate fuel vehicles.

So those are my comments and we'll flesh these out in written comments that will be provided on Friday, thank you.

PRESIDING MEMBER GEESMAN: Let me ask

you to address in your written comments whether the Commission should look to the base forecast for certain purposes and the high forecast for other purposes. Or is there a requirement in your judgement to use the same forecast for all purposes?

MR. SWEENEY: I'll address that. And I think, you know, one of the issues here is that there are infrastructure constraints that are identified that with a realistic oil price forecast and some recognition of the success of AB 1007, those constraints won't be as severe as they're depicted in the current staff work.

PRESIDING MEMBER GEESMAN: And perhaps the AB 32 targets won't be as high.

MR. SWEENEY: That's right.

PRESIDING MEMBER GEESMAN: And from a policy standpoint --

MR. SWEENEY: It is easier to get there.

PRESIDING MEMBER GEESMAN: From a policy standpoint then should we err on one side or the other in terms of the probability of being wrong?

MR. SWEENEY: I'll address that question in my comments, Commissioner Geesman.

PRESIDING MEMBER GEESMAN: I look

forward to it.

MR. SWEENEY: Thank you.

PRESIDING MEMBER GEESMAN: I might remind you that in 1982 when I was the Executive Director here we adopted a forecast, which at the time was a consensus forecast, which called for the price of oil in the year 2000 to be $100 in 1982 dollars. So we do have a track record of being wrong on the high side as well as wrong on the low side.

MR. SWEENEY: Yes. And I'm aware of the historical inaccuracies in the forecasts. There was a tendency in the '70s to over-forecast oil prices which were very low in the '80s. But the question I would have about that, about the forecasting error, is what reasons can anyone identify that would suggest that the base case oil price with substantially lower oil prices than what we're seeing today is the most likely to occur?

World economic recession is one thing that could bring oil prices down substantially. Resolving the political instability in the Middle East is another. But from my vantage point neither of those two things are on the horizon.

And so I guess the question becomes what are the reasons that one would believe that these forecasts, the base case forecasts, are accurate and not understating what oil prices are likely to be in the future. Thank you.

PRESIDING MEMBER GEESMAN: Well you know the motto of forecasters. Often wrong, never uncertain.

I don't have any other blue cards for this subject matter. Is there anyone else that wants to address us on our transportation chapter?

Why don't we go forward then. Panama.

MR. BARTHOLOMY: Thank you Commissioner. Good morning Commissioners, valued stakeholders, fellow hardworking bureaucrats. My name is Panama Bartholomy. I am proud to be representing the transportation and fuels division of the California Energy Commission and honored to be talking to you about the land use chapter of the Committee Draft of the Integrated Energy Policy Report.

I am disappointed that our Chairwoman cannot join us as her health will not allow for it but I am glad that she is home taking care of it. We are going to need her at full strength if we

are going to meet our 2020 goals.

Today I am going to be talking to you about the draft chapter, the Committee draft chapter on land use. And that is Chapter 8 in the Draft IEPR.

Here are the overall topics that I'll be talking about. I am going to be summarizing those significantly. If you want more detail I highly recommend you pick up that report and check it out for greater detail. I will just be going over these very briefly.

The first part of the chapter discusses the impact of land use in energy consumption and greenhouse gas emissions. It provides quite a bit of material looking at the growth of vehicle miles traveled, both historically and projected out into the future in the state of California. It has been growing since about 1975 at an annual rate of three percent and Caltrans expects it to continue to grow at about that rate into the foreseeable future. Those vehicle miles traveled make up a significant amount of the state's greenhouse gas emissions.

And the chapter focuses quite a bit of time on looking at the latest research on

community design and land use choices and how those land use choices affect the growth of vehicle miles traveled and then the use of energy and the emissions of greenhouse gasses that result from those land use choices.

Here is a chart showing historical and projected population, vehicle miles traveled and fuel demand. And then looking at various policies the state is considering or has already enacted and the impact of those policies on fuel use in California. All of the values are scaled 100 percent to 1990 levels to show the impact against the year that the Legislature and the Governor chose as the base year for the state's greenhouse gas policy, 1990.

Here is population and projected population. Commissioner Geesman will notice I did not put any specific times or numbers in there but showed instead growth rates.

Here is the actual and projected growth of vehicle miles traveled between 1990 and 2025. That is without the impact of AB 1493, the greenhouse gas tailpipe standards.

Here is the impact with AB 1493, the tailpipe greenhouse gas standards. You will

notice that projected VMT is going to be higher with 1493 than without 1493. That is due to what is called the rebound effect of, if you make it easier for people and cheaper for people to drive chances are they will drive more.

This then shows projected, real and projected use of gasoline and diesel fuel in the state of California out to 2025 without AB 1493. This in comparison to our AB 2076 petroleum reduction goals of getting us back to 1990 levels by 2020.

With AB 1493 we see this trend for the use of diesel and gasoline in California.

And with the combined policies of the low-carbon fuel standard and AB 1493 we see this general trend of the use of diesel and gasoline in the state of California. So as you can see we have about a 15 percent gap in there if we're going to meet our 2076 goals of petroleum reduction. And by and large to be able to get to that we're going to have to find ways to reduce the vehicle miles traveled.

The chapter then focuses on the impacts of land use on that vehicle miles traveled. It spends a significant amount of time talking about

what it calls sprawl. Sprawl, of course, is very hard to define. One smart growth advocate chose to define it as such. Just like Justice Potter Stewart's definition of pornography in 1973, it is something very hard to define but you know it when you see it.

Here is a picture of what we like to think of as sprawl. And there is no doubt that the impact of our community design choices and our transportation infrastructure choices play a large role in determining the vehicle miles traveled in the state and the growth of that vehicle miles traveled.

Ewing and Cervero out of the University of Maryland's National Center on Smart Growth define sprawl in this way. In 2001 they released probably the most significant report on the impacts of land use decisions on energy and climate change.

They looked at 83 of the largest metropolitan areas in the country. What they found is there's five major factors that are the major determinants in a community's design that impact the vehicle miles traveled and vehicle trips.

What they found is that density has the most significant, may have the most significant relationship to travel and transportation outcomes. And for every doubling of density in a community they found the community had about a five percent reduction in vehicle miles traveled. Overall they found that vehicle miles traveled and the decision whether to take a vehicle trip or not declined as accessibility, density and land use mixing increased.

The chapter then moves on into a discussion of tax policy and the role of Proposition 13 and other decisions made at the state level in response to Proposition 13 and how those decisions have affected local revenue.

Local government revenue has become increasingly more dependant upon sales tax, commercial sales tax, and less and less dependant upon property tax. Those impacts have started to guide land use decisions at the local level that has local governments trying more and more to find ways to spur commercial growth and less and less incentives to bring about housing, particularly affordable housing, within their communities. This has led to quite a number of communities

having a large commute population where people are having to drive until they qualify for mortgages to buy a house and then figure out ways to get in to the communities where they work.

The chapter then focuses on the role of local governments. In this effort it is very clear that land use authority in California is vested with local governments and guided by general plans.

Currently there is no explicit requirements within state law requiring local governments to address energy or greenhouse gasses in their general plans.

And probably as such only about ten percent of local governments have done so, addressing energy in their general plans.

One individual who is trying to do something about that is former governor, I sometimes forget the former part, former Governor Jerry Brown and current Attorney General. He has been using the California Environmental Quality Act to try to encourage and prod on local governments to begin to address greenhouse gas impacts of their general plans and their planning efforts.

Earlier this year he filed a lawsuit against the County of San Bernardino saying that the California Environmental Quality Act and AB 32 requires them to address the greenhouse gas impacts of their general plan update.

PRESIDING MEMBER GEESMAN: That new job has made him look a lot younger. (Laughter.)

MR. BARTHOLOMY: Absolutely, it's been some good years for him.

Earlier this year San Bernardino and the Attorney General settled and the major points of the settlement of the lawsuit are listed not only here on the slide but also in the draft chapter of the Integrated Energy Policy Report. But in short, it is going to require San Bernardino County to assess the greenhouse gasses being emitted out of their jurisdiction and then start to adopt a target to reduce greenhouse gasses emitted from their discretionary land use decisions and their internal government operations.

Probably the most significant I think quote that came out of that settlement was this from the press release of the Attorney General. It is a model I encourage other cities and

counties to adopt.

I think we can expect to continue to see this sort of activity from the Attorney General's office and we are starting to see more and more local governments now addressing greenhouse gasses within their general plan and specific plan areas. And the draft chapter discusses that and some of those potential implications for the state.

One of the impacts of that settlement was this bill, SB 97 from Senator Dutton. It was a budget trailer bill that is going to require the Office and Planning and Research to prepare guidelines for the feasible mitigation of greenhouse gas emissions and their impacts and put those forward to the Resources Agency for the Resources Agency's adoption by January 1, 2010.

This is a very short bill with potentially very long range and long reaching impacts. We are working with the Office of Planning and Research just to find out how far reaching this is going to be. But potentially this is going to require local governments to look at the greenhouse gas impacts of all of their planning decisions moving forward for any project considered a project under the California

Environmental Quality Act.

The chapter then goes on to discuss the role of regional governments and makes a recognition the issues of congestion, housing, economic development and greenhouse gas emissions mitigation require a more regional approach. It doesn't do much good if one neighboring city adopts a smart growth and the neighboring city next to it them decides to take on all of the commercial development that the smart growth community did not take on. It does nothing to mitigate congestion, housing issues or greenhouse gas mitigation efforts.

The California Blueprint Planning Program has been incredibly successful in the state about helping metropolitan planning organizations develop and adopt plans for the reduction of VMT, the accounting for all growth within a jurisdiction and reducing greenhouse gas emissions.

The chapter suggests that plans are good but for implementation local governments are going to need more than just plans to be able to implement them.

Probably the most high profile of these

blueprint plans has been the Sacramento Area Council of Governments Blueprint Plans. And if you'll excuse the toggle here I'm going to go back and forth between the base case scenario and the preferred Blueprint scenario developed by the Sacramento Area Council of Governments over about I believe two, two and a half years of development with thousands of stakeholders over the six county region.

And you can see if I toggle back and forth quickly between the base case and the preferred scenario the dramatic difference in growth projections from the base case to the preferred scenario. The base case shows what expected growth would look like between now and 2050 within the six county region. The preferred scenario was developed by stakeholders and local governments within the SACOG area.

Some of the impacts of the preferred scenario over the base case scenario, significantly less greenhouse gasses, up to 15 percent less in the base case. Less vehicle miles traveled per household and less agricultural land taken up by development. Significantly wider range of housing types. Significantly more growth

near transit and quite a bit more people living in areas with a good mix of housing and jobs.

The chapter then goes on to talk about the limited role of the state in land use. While it does recognize that we have very limited statutory authority over local government land use decisions we have quite a few key leverage points including CEQA, hosing element updates and stormwater plans.

AB 857 adopted in 2002 requires state agencies to be stewards of the land in their development policies and practices. Unfortunately it provides no teeth in that bill and I think it's questionable about whether many state agencies are complying with the letter of the law here.

The chapter spends a significant amount of time talking about infrastructure bonds and the potential of the use of infrastructure bonds and the development of criteria for those bonds and the impact that could have about encouraging local governments to make better land use decisions.

The chapter then goes on to talk about some of the other states and what we may learn from them. I particularly like this picture, just because it is always a pleasure to see our

governor in cowboy boots.

But particularly it focuses on Maryland and New Jersey's programs of statewide growth management plans. Where Maryland and New Jersey have made a clear decision that no state resources will go towards funding what they determine to be bad growth. That kind of growth can still happen within those jurisdictions but no state funding or state technical resources will go to support that kind of growth.

The chapter looks in depth about what some of the, both investor-owned and municipal utilities in California are doing to help local governments make better planning decisions. What you see here is a picture of what the rail yards in Sacramento could look like if built out to the developers' and the city's liking.

And I put that up there because the Sacramento Municipal Utilities District is doing quite a bit of planning about putting a combined heat and power system into -- a municipal heat and power system throughout that development.

Utilities have made it really clear to us, both in testimony and written comments, the investor-owned utilities feel quite restricted by

current energy efficiency program requirements about being able to help local governments with their land use planning efforts.

The chapter finishes with a discussion on research. And it makes it very clear that quite a bit more research is needed to be able to quantify impacts of different land use decisions.

The number one thing that local governments tell us is they're lacking both the tools and the funding to be able to make quality land use decisions.

In response, partially in response to that the Energy Commission is starting a Sustainable Communities research program, providing over $2 million annually for research in this area.

PRESIDING MEMBER GEESMAN: Could you explain the picture of cooks.

MR. BARTHOLOMY: Actually that is white lab coated research individuals. The hats were apparently more of an attempt to avoid looking like the Attorney General's current hairstyle.

The chapter finishes with recommendations. Probably the most dramatic recommendations are the first two where it calls

for the state to adopt legislation requiring regional growth management plans that will meet greenhouse gas emissions, housing, transportation and economic development targets for a region.

It then calls for legislation to have the state adopt a state growth management plan made up of the regional plans, pulled together and shifting resources over to support that statewide growth management plan and avoid growth outside of the statewide growth management plan.

It calls for the creation of criteria for our infrastructure bond programs that will incorporate climate and energy considerations.

And to provide continued technical and financial assistance to regional and local governments to be able to improve their land use decisions.

The chapter recommends that perhaps the state government should start by being the model for quality land use practices and calls for legislation to put some teeth into Senator Wiggins' earlier piece of legislation.

It calls for the state to look in greater depth at the impact of Prop 13 and other policy decisions around the tax code that have

created perverse incentives for sprawl in California and to begin to attempt to correct those perverse incentives.

And it calls for the Public Utilities Commission to allow for greater flexibility for investor-owned utilities to be able to assist local governments in their land use planning efforts.

I've given you a very brief and summarized overview of the chapter. I thank you for your time and attention today and I am available for any questions you may have.

PRESIDING MEMBER GEESMAN: Thank you Panama. I don't have any blue cards on this chapter. Is there anyone that cares to address us? Anyone on the phone? Les, come on up.

MR. GULIASI: Good morning. Is this on? Good morning. Les Guliasi with Pacific Gas and Electric Company. First I just want to say congratulations on a very well-done report and congratulations to the staff for the immense amount of effort that went into this year's report.

I just have a brief comment to make about this one area because I think it reflects

the Energy Commission's forward thinking in a lot of areas. But this is an important area that is going to become increasingly important as we move forward. I'm sorry that Commissioner Pfannenstiel isn't here today because I know that she is leading the cause here and taking this issue up as a champion.

This is an important area for PG&E. I think Panama rightly pointed out that there is a lot more that investor-owned utilities can do to make this area a success. Our customer energy efficiency programs have focused, as I just said, on customers at a customer level. We realize that that is restrictive and it is limiting.

What we have done at PG&E is recently create an organization that is looking at this issue at a community level. So we can take what we have learned from the experience we've had with providing resources to customers but expand that and broaden it to a higher level to work with communities.

There is a lot of growth in California still in our service territory in the Central Valley. We have opportunities here to take the kind of resources that we have and not only just

in terms of customer energy efficiency but all services that we provide.

In another chapter you talk about distribution planning. It gives us an opportunity to rethink how we deal with communities in terms of planning for distribution services on both gas and electricity.

This is requiring us to rethink our traditional model of how we delivered services to customers and I think there is going to be a long road ahead. But I think you are showing some leadership here in at least identifying the issue, spotlighting it. And to the extent that you can take some leadership role in working with your sister agencies, with local and federal governments would be terrific and we're there to work with you on this in a collaborative fashion.

PRESIDING MEMBER GEESMAN: Thank you very much for your comments. I do think that PG&E is likely to be an extremely important player in this field. Just several weeks ago the Public Utilities Commission issued their big and bold efficiency decision, which I think your company has been quoted in the newspapers as being supportive of.

The targets that that decision set for improvements, and frankly significant change in the energy consumption for new construction, are so sizable that I think it is going to take all of us, and in particular your company in its enduring relationship with its customers, in order to accomplish that. So I thank you for your comments, Les.

MR. GULIASI: You're welcome.

COMMISSIONER BYRON: Mr. Guliasi, quick question. I don't mean to take a lot of time on this but the conclusion in the IEPR about the IOUs playing an even greater role in planning and developing programs and projects, and then the conclusion of sorts that states their ability to do so is hamstrung by current energy efficiency programs. I know you talked about that a little bit. Can you elaborate a little bit for this Commissioner on if that's correct and why?

MR. GULIASI: I don't fully understand the comment but what I understand by the comment, perhaps we can get some clarification from staff. I think that is really the essence underlies and focus, which has been at a customer level. It's really been at a residential customer home,

apartment or commercial facility, industrial facility. Looking at processes, looking at the traditional energy efficiency measures.

And I think what we need to do is just expand our thinking, broaden our horizons and think about the essence of what we're talking about. How do we, you know, plan for land use? How does transportation interact with the way we lay out our communities? How can we think about providing distribution services? It might be distributed generation at a local level.

Working with communities, not just with customers within those communities. But just to think about the array of services, packages of services that we typically and traditionally have provided to customers. But to rethink them and bring them to a community and not just to a customer.

COMMISSIONER BYRON: Thank you.

Mr. Bartholomy, did you want to add anything to that?

MR. BARTHOLOMY: Yes, thank you, Commissioner. What we heard both in testimony and written comments from investor-owned utilities was that current energy efficiency program

requirements as far as when savings need to be realized versus the investment, rate payer funds, is in such a short time frame it doesn't fit with the long range planning efforts. You're just not going to see the kind of savings in two to three years that you'd expect from some energy efficiency measures that are traditionally covered under the plans.

Additionally there's many co-benefits to the planning efforts, not just kilowatt hour reduction but also VMT, greenhouse gas, criteria pollutants. And to use only kilowatt hour justification for these efforts didn't seem to capture the full benefit of the investment of regular money in this effort. Thank you.

COMMISSIONER BYRON: Thank you.

PRESIDING MEMBER GEESMAN: Any other comments on this subject?

Why don't we go on. Thanks gentlemen.

MS. WHITE: Jim Fore will be talking to us about the natural gas chapter.

MR. FORE: Good morning. Today I would like to address the issues that were addressed in the IEPR on natural gas and look at the evaluations that we have made and the results, the

conclusions we have drawn from these.

The natural gas forecast we made for the Commission is a long term forecast assessing the North American market and it covers the natural gas demand, supply, prices and infrastructure changes that are occurring, not only in California and the West but in the US and now is becoming more of an international market as we look at re-gasification and LNG to be delivered to the US.

The purpose of the gas market evaluation is to assess the degree to which California, the western states and the western Canada provinces rely on natural gas and can rely on it.

To position California to take full advantage of the available gas resources, both within the state and from the producing basins that are in the west, and potentially perhaps deliveries in the international market.

To assess end use demand and the impact that future gas-fired generation capacity will have on the market. This is important not only within California but the trends we're seeing throughout the US and perhaps in Canada of going to more gas-fired generating capacity and the impact that will have on the overall gas demand

throughout North America.

And we wanted to evaluate the regional vulnerability to changes in the gas market.

We're looking here at disruptions. Cold weather, new infrastructure that could actually move gas away from California, in order to determine what impact it would have on the state.

All right. If we look at the historical implications for the state, the state has done an excellent job in reducing the per capita consumption of gas. In the early part of the program it was very dramatic. As we burst into the '90s and the 2000s we see that it has tended to flatten out somewhat. And this has resulted in the gas demand sort of flattening out in terms of the overall demand. The main driver here was a population increase that kept the per capita increase -- decrease from maybe having the full impact on the state.

When we look historically we see that basically we have been able to keep our demand flat over this time period, even with the dramatic decreases we have seen in per capita consumption.

In our forecast period we see the same trend continuing. We still have the same drivers

in the market, population, gross domestic product and industrial production as well as oil prices. So we see a rather flat demand, the main increase we see in California is in the power generation market. If it wasn't for that our demand probably would be a little less than one percent of the overall growth rate.

If we look at the US we're seeing basically the same trend in North America. It's rather flat and growing about two percent. And the main driver is in the US from the natural gas being used for electric generation.

This is historical. Just to take a look at how the US has depended upon imports of gas. We have always had imports from Canada through the pipeline system and we see these imports increasing as we go out into the future. But more of these imports will be coming in in the form of LNG rather than pipeline imports from Canada. And basically this is the result of what we see on the supply situation for Canada, which I'll cover just a little bit later.

If we look here we see that we basically have the Western Canadian Sedimentary Basin, the Rockies, San Juan and Permian are the main

suppliers of gas to California. We see an actual decline in the Permian Basin. And historically you can look at the graph and look at the production and you'll see a trend there.

San Juan is basically becoming flat. The Western Canada Basin is flat and slightly declining. There's quite a lot of stuff in the literature indicating they may have some rapid declines at Permian, Western Canada. The Rockies is the bright spot for the west with increasing gas supplies so we'll depend more and more on the Rockies in terms of potential gas that California may be able to get from these western basins.

If we look at what we're seeing here. We see flat supplies dropping off towards the end. We see a slight increase in gas potential coming in the mid-part of the forecast period. This is basically related to our price forecast that we have. We have a price that is sort of staying flat in the early years and then starting to increase, which encourages additional production. But the price doesn't increase rapidly enough to keep, to maintain that production so we see it starting to drop off towards the end.

If we look at California's supply, our

traditional supplies basically are staying in place except for the Permian Basin area and coming out of the southwest. This is being displaced by LNG imports that are coming in through Mexico at Costa Azul. Basically what we're having is the substitution effect as this gas is hitting the Ehrenberg/Blythe area and knocking out basically southwest gas, which will probably be going into the Phoenix market. And maybe even moving east out the Permian into the East Canada and mid-continent area.

We wanted to take a look at the LNG imports and we had an outside consultant also come in and analyze the LNG market for the US, Jim Jensen. And he had three cases. He had a base case, which was the most likely course of LNG trade development; he had a high case which represented some of the more optimistic views of LNG demand growth; and the low case which assumed supply problems would continue to plague future LNG development and this is basically in the geo-political area.

We had a rather aggressive LNG import in our forecast. The green is the staff's. The lines through here are what Jim Jensen expected

could be imported into the US. He has both the high case and then his most likely and the low case basically are the same.

Now these imports, although they're high and they're probably higher than what he said would be imported, they only represent about a third of the LNG that's available in the Atlantic Basin through both producers of gas in the Atlantic and the Middle East. So the volume is there, it would be a matter of price as to whether we would be able to meet these demands that we have forecasted in the LNG market.

On the west coast we have held the LNG imports down somewhat by putting a cap on the capacity through Costa Azul and allowing it to only come in at one Bcf and then expanding later on. He would indicate that these supplies could be easily met from the Pacific Basin and the Middle East in terms of gas moving into the West Coast.

Now if we take a look at our price projections and what impacts it has on California. If we look at the Henry Hub price it goes up around three percent. And we notice that the El Paso San Juan, Opal which is the Rockies and AECO

which is the Canadian price, tend to move higher during our forecast period. We have them rising about three and a half percent. So we're losing some of the potential discount we might have.

The reason for the Henry Hub prices staying a little bit lower in their growth rate is because of the LNG that we have flowing into the Gulf Coast. And we feel that is curtailing price increases that you might normally see at Henry Hub if you're relying on more development in the Gulf offshore deep water where we're having one hub come on. An independent hub is coming on this year. So when you're looking at 9,000 feet of water you're not talking about cheap gas being developed there.

If we look at the border price in relation to Henry Hub for California. We have always experienced a favorable price from Henry Hub in the west. But because of the increasing prices we see in our production areas we're seeing this fade away to where we might even be left to where we're actually paying more than Henry Hub. But we see it slowly decreasing in terms of that advantage that we had in the past.

If we take a look at the overall

findings we had. The growth rate in the US will be about two percent. And the main driver of this growth rate, California will have a slower growth rate at around one percent. But the main driver will be power gen, both in the US overall market as well as California. And we have about 5.5 percent of the US market and around two percent in California.

Production will increase slightly over the next decade, probably less than one percent. This will basically be coal-bed methane and the shale developments that will be driving this increase in gas. There may be some deep water development but basically it's going to be what we call the non-conventional gas.

We see LNG playing a more important role in the North American gas supply mix where at the end of our forecast period LNG imports would be more than Canadian pipe imports into the US.

Our natural gas prices are projected to go about three percent. Henry Hub will go a little bit under that. The West and the Rockies we see going about three and a half percent or a little bit more.

As far as the infrastructure changes.

We see infrastructure changes. The West Coast, we did have the LNG terminal in Baja. That's the only terminal we have in the reference case.

This causes a reversal of the North Baja pipeline in order to move that gas from Baja into the Blythe area. Then we have some of that LNG moving into the San Diego area.

We have a pipeline expansion in Southern California to move gas from Central and Northern California. This is the result of basically the LNG coming into the Blythe area and having to find a home to go to, which will cause some price differentials that we think will cause it to move into the mid-central area of California.

The other major infrastructure change we have as far as in the national outlook was the Rockies Express pipeline that will be taking gas out of the Rockies area into the mid-continent and all the way to New England when it is eventually done. And we think that will have some impact on both the availability of gas for California and the price that we would have to pay in order to track Rockies gas to California.

The recommendations that the IEPR Committee is coming up with is the Energy

Commission advocates polices to allow California to secure alternate and diverse sources of natural gas.

The Energy Commission supports cost-effective energy efficiency measures for natural gas consumption. Most of this is occurring in the electric generation sector as well as the building and housing codes and appliances codes.

The Energy Commission encourages renewable sources of energy.

The Energy Commission will continue to incorporate and use new analytical tools to assess and forecast the state's natural gas market.

And the Energy Commission will pursue the following actions in the 2009 Integrated Energy Policy Report. That we will continue to evaluate the models that we use for natural gas forecasting. Develop some alternative tools, which would be probability and outcome -- quantify outcomes for demand scenarios to obtain a greater insight into the gas market.

Then with the new research we're having going on in the Commission we will expand that to include other areas, not only for energy efficiency programs but looking at gas storage and

other things that could impact the gas availability and price in the state.

And we're ready for any questions that people might have.

PRESIDING MEMBER GEESMAN: My recollection from the draft that I read was that in terms of your first bullet on recommendations that when we said that the Commission advocates policies that allow California to secure alternative and diverse sources of natural gas we made clear that that includes LNG.

MR. FORE: Yes, it does include LNG.

PRESIDING MEMBER GEESMAN: Which has been our position in both the 2003 and 2005 IEPRs.

MR. FORE: Right. We're assuming we're going to increase gas-on-gas competition. Whether it's LNG or a new source it will be beneficial for the state.

PRESIDING MEMBER GEESMAN: What I'd like to see you guys do between now and when we bring a final report to the full Commission is attempt to quantify. In the transportation staff's AB 1007 report they seem to put considerable emphasis on natural gas as a transportation fuel. I'd like you to try and quantify what those impacts may be

during your forecast period.

MR. FORE: All right.

PRESIDING MEMBER GEESMAN: And then perhaps make some qualitative assessments as to the ramifications out beyond the forecast period. Because the 1007 report goes as far as 2050 in terms of some of the scenarios that they review.

MR. FORE: Okay, we'll certainly take a look at that.

PRESIDING MEMBER GEESMAN: Thanks. Are there comments on this from anyone here in the audience? Yes.

MR. GLICK: Thank you sir.

PRESIDING MEMBER GEESMAN: Come on up.

MR. GLICK: Good morning. My name is Kent Glick and I have a question on the staff reference case. If we could have Jim explain what RPS goal compliance and quantification is built into the reference case. I have heard confusing things about different time periods. Whether legislative targets will be met, whether the governor's targets will be met. Thank you.

MR. FORE: Well the goals are in the electricity sector. And they're meeting the renewable portfolio goals by 2013 at the latest

but they're phasing in through the 2010 to 2013 time period.

PRESIDING MEMBER GEESMAN: Other comments or questions? Come on up, Les.

MR. GULIASI: Thank you. Once again Les Guliasi with PG&E. I don't have a lot to say but I think I just want to say a couple of things. In preface I just want to say that similarly I'll be here tomorrow and will have a lot more to say on many of the subjects tomorrow.

What I intend to do now as well as tomorrow is preview what we are going to say more extensively in our written comments. I don't want to take up a lot of air time either today or tomorrow by going through long monologues, you know, about every issue and how we see every issue and where we agree or where we agree with you. But I just wanted to point out to you some of the issues that we are going to be addressing more fully in comments.

With respect to natural gas. I couldn't let the opportunity go by because as you know PG&E is a very large distributor of natural -- transporter and distributor of natural gas. We serve over four million customers. It is a very

important issue to us and there are a couple of things that I took away from the chapter.

One is I am glad to see that you recognize that conventional fuels will continue to be the mainstay of the resource mix for the foreseeable future. We understand and agree with that. But at the same time we are also encouraged that you see the need to continue to increase the supply of natural gas for the foreseeable future, and particularly LNG. We're hoping that LNG will become an important alternative to the traditional sources of natural gas and it will provide opportunities for us both in terms of price and supply to continue to serve our customers.

Another important take-away from the chapter is that you importantly recognize that forecasting natural gas demand as well as price will become increasingly more difficult in a carbon-constrained world. I am glad that you are going to rethink the tools, the models, the inputs, the assumptions that we traditionally use or you have traditionally used in forecasting natural gas demand.

And I think this is going to be a huge challenge because we don't know exactly what the

world is going to look like and how our analytical tools will need to be adapted to that new world. So I am glad that you are making that effort and I think we too need to spend some time doing exactly that as well. That concludes my remarks, thank you.

PRESIDING MEMBER GEESMAN: You've had a good day, Les. We look forward to your comments tomorrow.

Are there any other comments to be brought before us today on any of the subjects that we have touched on this morning?

Anyone else on the telephone?

Lorraine, what else do we have?

MS. WHITE: That actually concludes the agenda that we had scheduled for today.

PRESIDING MEMBER GEESMAN: Why don't we adjourn then?

MS. WHITE: Thank you.

PRESIDING MEMBER GEESMAN: Thank you all very much for attending.

Is there somebody else on the phone? We'll be adjourned.

(Off the record.)

PRESIDING MEMBER GEESMAN: Back on the

record.

MR. LANGENBERG: Is it live?

OPERATOR: You are live.

MR. LANGENBERG: Okay, thank you. Good morning Commissioner Geesman, Joe Langenberg here. How are you doing?

PRESIDING MEMBER GEESMAN: Good morning. Just fine.

MR. LANGENBERG: Okay. My question is, I've been listening to the discussion on natural gas. And I am wondering why you don't put a little more focus on coal gasification? We have tremendous amounts of coal in this nation that are just sitting there. Nobody wants to use coal anymore because it is too dirty. But if we gasify the coal it may be an alternative source of more gas.

PRESIDING MEMBER GEESMAN: Well there's a pretty extensive federal program on that, Mr. Langenberg, and we took quite a bit of evidence on the question in our workshop here a week and a half ago on our AB 1925 report having to do with carbon capture and sequestration.

MR. LANGENBERG: Granted, carbon capture, this is a brand new ball game

irrespective of what fuel we're using. But whatever we're doing with any of the other fuel we could do the same thing with coal gasification. We could just add this extra process to minimize the carbon emissions.

My point is that we're focusing a tremendous amount of attention on liquified natural gas but we didn't think of liquified natural gas until the price of natural gas shot up to what it is now. What I'm thinking is that with the price of natural gas, assuming it is going to stay as high as it is, it may be cost-effective to start thinking about coal gasification as a viable alternative.

PRESIDING MEMBER GEESMAN: Okay, well thank you for those remarks.

MR. LANGENBERG: Okay, thank you for letting me speak.

PRESIDING MEMBER GEESMAN: We'll be adjourned.

MS. WHITE: Thank you.

(Whereupon, at 10:40 a.m., the Committee workshop was adjourned.)

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CERTIFICATE OF REPORTER

I, JOHN COTA, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Energy Commission Committee Workshop; that it was thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said workshop, nor in any way interested in outcome of said workshop.

IN WITNESS WHEREOF, I have hereunto set my hand this 18th day of October, 2007.